AUDECIBEL

JUNE 1955

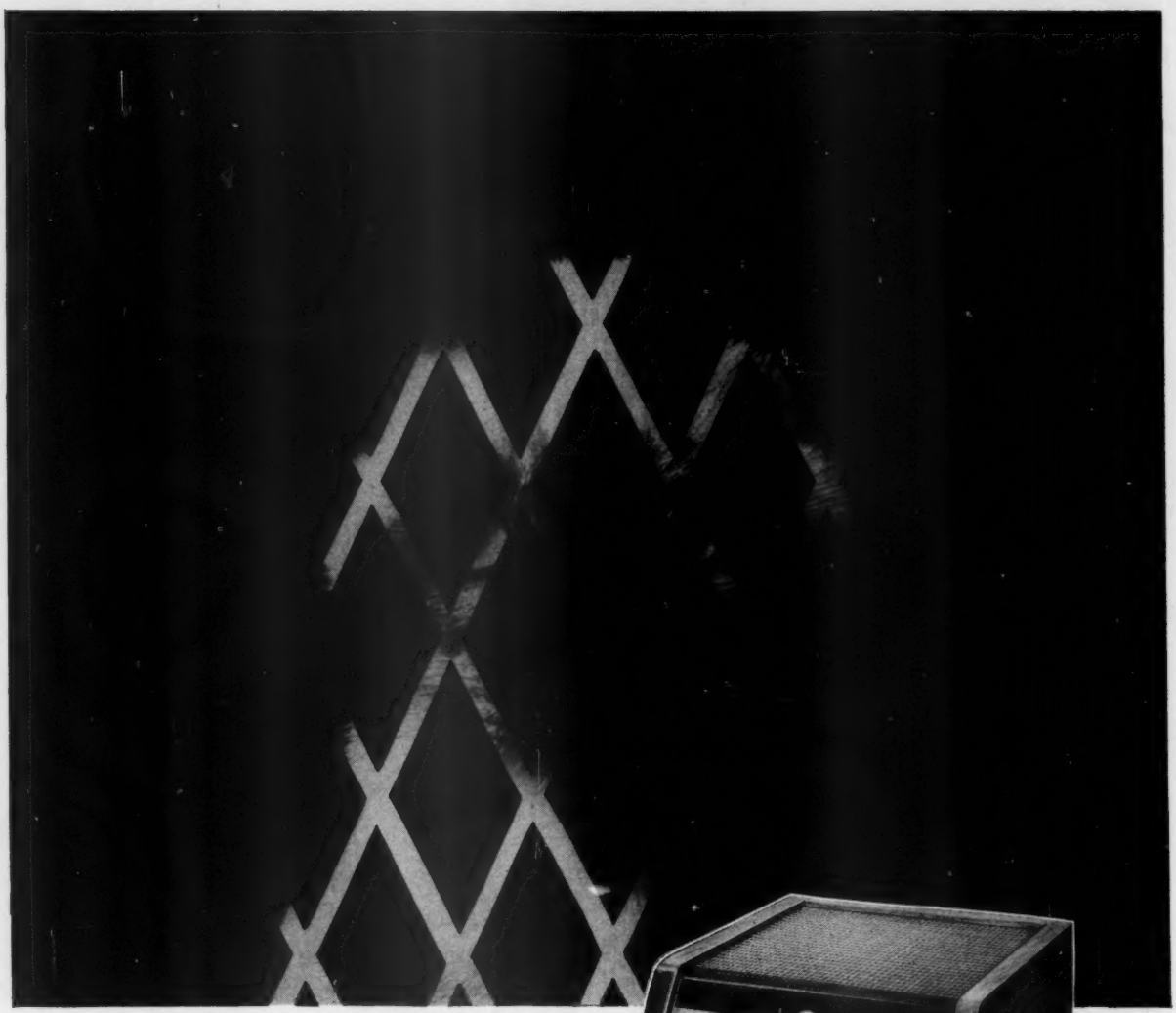
In this issue

Psychological Aspects of Deafness
by Duncan R. C. Scott

Modern Hearing Tests
by Dr. Moe Bergman

Fourth Annual Meeting Program
Society of Hearing Aid Audiologists

JOURNAL OF THE SOCIETY OF HEARING AID AUDIOLOGISTS



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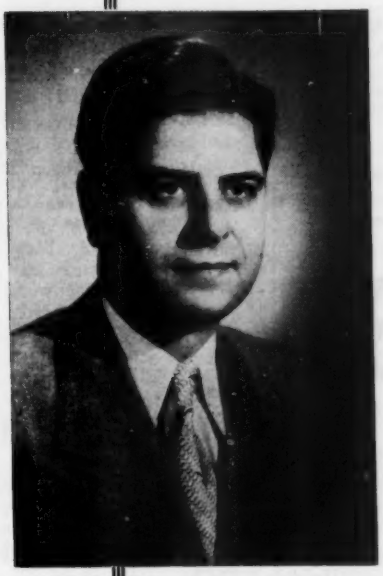

Thornton Zanolli
Editorial Director

Now Hear This...

One of the most important commodities sold by the hearing aid industry is SERVICE. The Hearing Aid Audiologist's business growth — and profit growth—is dependent on the quality of the service he can offer.

Of course, service is not a commodity — it is an intangible. It's hard to pin down accurately. But it includes elements of courtesy and helpfulness and interest in the hard of hearing person and his problems — and, most important, it is based on a knowledge of the latest developments and techniques in the hearing aid industry and in medical science.

In the last analysis, what the hard of hearing person wants is the feeling that the Hearing Aid Audiologist has a genuine interest in his problems — to the extent that he devotes most of his time and energy in trying to get information that will help solve those problems.

Much of this information comes to the Hearing Aid Audiologist in the form of printed materials — this magazine, for example; manufacturers' literature; other professional journals, books and publications. To the extent that these materials are able to do a continuous, full-time, all-year-round job, they are invaluable.

But there is no substitute for **personal** contact with the leading authorities in the hearing aid field. Printed communications are generally a one-way affair. Personal conversations permit questions and answers — two-way communication. Ambiguous points can be readily cleared up. Off-the-cuff and off-the-record information can be imparted.

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But, more important, it will enable you to say to the people to whom you render service, "By the way, here's something interesting I learned at the Annual Meeting of the Society of Hearing Aid Audiologists that may help you —"

THORNTON ZANOLLI
President, S.H.A.A.

The Society of Hearing Aid Audiologists

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THE PURPOSE: AUDECIBEL is strictly an educational and professional journal, the purpose of which is to bring to the otologist, the hearing aid audiologist, and others interested in the field of hearing and audiology, authoritative articles, papers and data concerned with research, techniques, education and new developments in the field of treating and assisting the hard of hearing.

THE GOAL: The Society of Hearing Aid Audiologists is dedicated to the goal of reaching and maintaining the highest possible ethical standards in the field of hearing aid audiology. AUDECIBEL is dedicated to the goal of rapport among all those concerned with the hard of hearing so that mutual and overlapping problems may be recognized and outstanding ideas, skills and experiences be shared for the greater benefit of all. You are urged to write in for details of how YOU may participate in and benefit by this worthwhile endeavor.

Advice of Counsel

by Felix Visk

If you drive, don't drink. If you drink, hire a taxi.

Recently I was fortunate in hearing a talk by Dr. H. A. Heise of Milwaukee, Wis. and will attempt to give you the highlights.

Dr. Heise as a young man just out of medical school was often called on to examine men the police had arrested and then testify as to their state of sobriety. He was struck with the utter lack of science connected with any test for drunkenness. Of course, they used the old familiar ones—speech, coordination, breath—but he well knew that things other than alcohol could thicken a man's speech or interfere with his coordination. As for breath—pure alcohol has practically no order.

As a result of his experience, he undertook a series of tests over several years to determine just what alcohol does. The results are very interesting.

First, alcohol is not a stimulant, but a depressant or anesthetic. It reduces the ability of the brain to use oxygen from the blood. This fact is particularly important when one considers alcohol and driving, because the part of the brain most affected, and affected first, is the upper frontal section which controls our real thinking and judgment.

Alcohol is not digested in the usual manner but passes directly into the blood stream through the stomach wall; thus, it acts quickly. On the other hand undigested food in the stomach may hinder its pasage into the blood by absorbing some of it, and certain foods will coat the stomach, thus slowing down its absorption through the wall.

This accounts for the fact that your after-dinner drink is not nearly as potent as your before-dinner cocktail.

Dr. Heise's tests proved that the judgment of a man is affected enough to classify him as "under the influence" when his blood contains .05% of alcohol. However, in most states he is not legally said to be intoxicated until the percentage of alcohol in the blood reaches .15% — equivalent to about 3 ounces of pure alcohol.

Dr. Heise's experiments proved that the body will burn about 1/3 of an ounce of pure alcohol an hour, or a little less than one pint of 100 proof whiskey in 24 hours. Therefore, if you drink more than 1/24 of a pint of 100 proof whiskey in an hour, you are "under the influence" — even though you don't think so.

Dr. Heise, in the course of his experiments, rigged up a car with various devices to test reaction time and coordination. Then he had subjects drink varying amounts and drive these cars. In every case, reaction, coordination and judgment were affected.

On one occasion a truck got by the road blocks set up to guard the area in which the experiments were conducted and narrowly missed a subject as he made a left turn. When he returned to the starting point he asked why the doctor was so agitated. Dr. Heise replied that he was certain the truck was going to smash the car and bring a tragic end to the experiment. The driver said, "What truck?" He hadn't even known that a truck was in the area.

Maybe this explains some accidents I have investigated where no one had more than "two beers", but no one knew what happend.

The police use three methods of test-

(*Continued on page 18*)

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Psychological ASPECTS OF DEAFNESS

As Related to the Fitting and Use of Hearing Aids

by DUNCAN R. C. SCOTT

For us who are interested in deafness and its relation to the use of hearing aids, the title of this paper asks two questions: (1) Why do not all of the hard of hearing who can be benefited by the use of a hearing aid accept it? (2) Are there personality differences among the hard of hearing which separate them into distinct groups with respect to the acceptance and use of a hearing aid?

The answer to the first question lies within the realm of personality. Any clinician can resolve the second. He knows that those who could be helped by the use of a hearing aid can be divided into three groups. The fortunate group are those who accept the instrument and use it with satisfaction. In between are the uncertain individuals; who, though having a genuine desire for better communication, are not at all certain they can achieve it through the use of a hearing aid. This is the new and relatively untapped market for the hearing aid dealer. In the final group are those who will not, and do not accomodate successfully to amplification. At a later date when there is a greater social acceptance of the use of instruments by the in-between group, I expect this final and resistive group will decrease in number.

Since an organic basis has been ruled out as a basis of resistance, the answer must lie in the direction of individual psychology or personality.

When reading the literature on deafness and personality, one must remember that when the evidence is gathered and put through statistical procedures, the final interpretation is a personal judgment on the part of the investigator.

A judgment is a comparison with some standard. A judgment of the personality of those with impaired hearing has too frequently been the result of a comparison with the hearing majority of the population and the following labels have emerged:

1. Subject to dependency upon others.
2. A sense of personal inferiority.
3. Feelings of hopelessness, and fear.
4. A sense of brooding and bitterness.
5. Suspicious of their associates and friends.
6. Prone to delusions of persecution.
7. Generally apathetic and listless.

A comparison of these traits in what may be called the verbal and non-verbal situations of our life experiences will reveal that they are much more prevalent in the verbal areas. Other investigators in this area of personality have concluded that the deaf are slightly more introverted and less dominant than the hearing but that the most dramatic finding is that there are greater similarities than differences between the deaf and hearing.

Another term, "introversion," has frequently been applied to the deaf and hard of hearing. The introverted or deaf individual is considered to be ruled by standards and principles when making decisions about life problems. Once these decisions have been made, he is inflexible to proposed alternatives and unadaptable to new situations which he may encounter. When these conditions are found in the normal hearing individual they are indicative of a state of mental pathology. Because of the state of social isolation, the hard of hearing individual must learn to live by standards and principles since the usual auditory cues are not present. He is going to be inflexible to the new conditions because of partial or inadequate comprehension.

The central thesis of this paper is that the personality of the deaf can not be legitimately judged in the area where verbal communication is required. Your resistive hearing aid client will also display neurotic symptoms in areas where there is no premium placed upon verbal communication. This is borne out by the psychological literature which goes on to suggest that deafness is not the cause of emotional problems but is a powerful force in bringing to the surface any problems which are latent in the individual.

In trying to serve these individuals, a brief sketch of the composition of personality will be helpful. The personality of the individual is the product of the interaction of the individual with his environment. Between these two poles are the pressures of the physical needs of the individual in the direction of his environment. The environment, at the other extreme, is the source of pressures applied to the individual. These may be summed up as the social pressures of expectation on the part of society in general as reflected by the home, the community, the man's occupation, etc.

Ordinarily, the Hearing Aid Audiologist is concerned with fitting hearing aids to people. This article discusses some interesting points with regard to fitting people to hearing aids.

From these pressures emerge the

two "worlds" of this hypothetical individual. The "public" world is open for all to see and appraise. It is represented by his products, his actions and his expressions. A man is considered "good" or "bad", a "success" or a "failure" in accord with the evaluation of this public world.

The "private" world is the individual's concept of himself. This he does not reveal to the casual eye. The private world is the result of the interaction of the individual with his environment and may be said to comprise three concepts of self. They are:

1. Self-potency,
2. Self consistency, and
3. Self-evaluation.

Self-potency is the personal feeling of ability to meet the problems of life as they are manifested in all of its aspects. It is considered to be the basis upon which we build our interests. As an illustration, interest in politics may be mentioned. Many people are not interested in the activities in the nation's capital or the state legislature, not because they feel it does not concern them, but because they feel they can not do any thing about the course of events taking place.

When the feeling of self-potency is removed the individual breaks down and may be described as a schizophrenic. Individuals are not equally potent in all of their areas of activity but are able to achieve a sense of excellence in some area which is sufficient to maintain an overall sense of adequacy. Mental health is considered dependent upon the ability to maintain some feeling of success or ego satisfaction. The closer the individual comes to a feeling of threat to his sense of self-potency, the less is his tolerance for new frustrations.

Self-potency is dominant over self-consistency and self-evaluation. To some degree the development of these last two facets of personality is directly related to the first.

Consistency or Contradiction

Self consistency is related to the life experience of the individual. It may be at the conscious or subconscious level of perception. It is the consistency of conduct displayed in relation to the many experiences of life. At the conscious level, it may be reflected in the question of whether the individual is displaying the kind of personal conduct that is expected of him. It asks the question of whether he is conducting himself in accord with his capacity as a lawyer, a plumber, or a carpenter.

On the unconscious level, an inconsistent concept of self is most frequently revealed in a contradiction between the individual's status in life and the mode of dress, the quality of voice used and the choice he makes of words to express his ideas to others. The hearing aid dealer should look forward to difficulties when he sees some one in the middle years of life enter his office with the manner and dress of some one in their twenties. This individual does not feel himself to be in sufficient control of his relations of life to live completely in the present.

Let us now examine this personality concept in light of one clinician's impressions of the failures in adjustment to the use of amplification. This hypothetical individual has the potential for adequate adjustment in that he can either duplicate isolated speech sounds or distinguish between them when heard in pairs by stating whether they are the same or different. This average picture proceeds something like this:

1. His age is somewhere in the later half of the fourth decade or older.

2. Tinnitus or "head noises" are usually present as a disturbing factor. They are usually considered as coming from somewhere in the environment.

3. It is not at all infrequent that this individual can not tell which is the better ear even though the audiometric tests indicate differences of 10 - 20 db. He usually betrays himself through cocking the better ear when trying to respond to directions.

4. The hearing loss is usually of two or more years' duration.

5. The women of this group are demanding and insist that the only instrument they will accept is one which will not reveal that they are wearing a prosthetic device.

6. When the instrument is placed in the ear of selection, the immediate complaint is an intolerance to: (a) environmental noises, (b) instrument noise, (c) clothing noise.

7. They will achieve discrimination scores on the clinical instrumentation which are in the vicinity of 35% better than the scores derived with the use of the hearing aid.

8. They are able to follow light conversation dealing with such topics as the weather, how to reach their residence and the number and names of their relatives. Change the topic to something of strong self relevance, and the key words and the sense of the statement are missed.

9. Those who are not bound by a high degree of felt necessity or interest to their occupations will frequently fail in their adjustment. In other words, they do not have sufficient motivation to succeed.

10. Their responses during the testing procedure indicate a large amount of indecision. This is noticeable in terms of facial tensions and perspiration on the palms of the hands.

Such a performance would suggest the following personality traits: (1) Rigidity in accomodation to new experiences. (2) A state of emotional tension stemming from an undue concern for self. This inhibits accurate discrimination of external stimuli. All external stimuli, whether conversation or environmental noises, appear to have an equal impact. (3) A sense of personal inferiority dominates situations in which they should be expected to succeed on the hearing level. (4) They are bound up in themselves and their problems and do not make an adequate attempt at adjustment because they lack a dominant drive, or feeling of need, in that direction.

Effects of Hearing Loss

In terms of our schema of the private world of this individual, it may be said that the hearing loss has been the precipitating cause in the breakdown in a relatively weak feeling of self-potency; resulting in a sense of frustration and feeling of emotional tension.

The sense of self-consistency may or may not be impaired. The greater the discrepancy in self consistency between the verbal and non-verbal areas of the individual, the more optimistic one can be in the expectation of successful adjustment to amplification. In terms of the interest of the hearing aid dealer, when he can notice that his prospective client is making an adjustment to his non-verbal activities, he can expect the same application to the use of a hearing aid.

The sense of self-value may be impaired to the extent that this valuation is concentrated in the verbal area. Without some sense of self-value in the non-verbal areas, the subject is going to experience a deep sense of frustration unless he has a high regard for his ability to master new and difficult situations.

The technique for convincing the reluctant hard of hearing individual that he can be benefited by the use of an instrument is revamped from the interesting book by Dollard and Miller, "Personality and Psychotherapy: An Analysis in terms of Learning, Thinking and Culture."

The authors define the neurotic as one who does not make use of the obvious opportunities to obtain the satisfactions that life has to offer. The neurotic symptoms are real, and they offer the following symptoms as evidence:

1. Insomnia,
2. Irritability,
3. Sex inhibitions,
4. Distaste for life,
5. A lack of personal goals,
6. Phobias,

Duncan R. C. Scott is director of the Speech and Hearing Clinic, Presbyterian Hospital of Chicago.

7. Headaches,
8. Irrational fears, and
9. Apathy.

With but one or two execeptions, the above is an accurate picture of the adult who rejects the use of a hearing aid or is almost convinced that he can not be benefited. The conflict produces this misery. The conflict is due to colliding forces. In the positive direction is the force which brought the individual to the hearing aid dealer. In the negative direction is the fear of accepting a permanent defect; the fear of wearing a visible stigma, as represented by the hearing aid; and the fear of failure in its use.

Our subject's sense of self-potency has been badly damaged and his approach to the problem of using an instrument is loaded with conflict which, when coupled with the distortion of sounds and, perhaps, the partial failure of memory for discrete sounds and environmental noises, loads the adjustment situation against him. The failure to view the problem of impaired hearing realistically is the source of the stupidity which Dollard and Miller mention.

Pathological Responses Learned

These pathological responses are considered to be the results of learning from experience.

Learning is achieved through the following four steps:

1. Drive, or motivation, or need,

2. Responses; may be an act or thought which is the result of a need,

3. Cue, or the guide posts by which one travels to the satisfaction of the need.

4. Reinforcement; the reward or satisfaction derived from the adequate meeting of the need.

When the hard of hearing individual is seated in your office, you must bear in mind that his sense of self-potency has been badly damaged. Part of his resistance to the use of an instrument probably dates from a fragile sense of adequacy that predated the loss of hearing. But also a contributing factor can be the magnitude of the demand which he placed upon hearing before its loss. The impact of the loss is obviously greater for the school teacher than it is for the carpenter or printer.

Now to consider the procedure in terms of the four factors of learning: Drive is present in a reduced state. The individual does not have sufficient drive towards enhanced communication or you would not be faced with the problem of countering his resistance. You should build his sense of self-potency, by the subtle compliment of listening attentively to his story. When he has finished, ask him how the other members of his family feel about his affliction. Generally, there will be some member of the family or close personal friend, whose opinion your prospective client will value highly. This person can be turned into a valuable ally. Suggest to your subject that he return to your office with this friend who can act as an impartial observer.

In the course of this conversation, you should attempt to find out the areas of hearing for which he has the greatest need. In short, you should emerge with a fairly good idea of his vocation and avocational needs for hearing. With information you can plan a program of guidance.

At no time during this preliminary interview should you antagonize him by stating that he is capable of much better hearing than he thinks. Doing this fosters a state of resistance and resentment. He logically thinks you are more interested in making a "sale" than helping him.

The "response" in this sequence of steps in learning to make a more adequate adjustment to his hearing deficiency will be when and if he returns to the office with this friend or member of the family.

The "cue" to better hearing will follow the audiometric examination when the initial instrument has been chosen and placed in the prospective client's ear. No comment or question should be made on how well he hears. I would suggest that the session get off to a start by the dealer asking the client to describe something which is dominant in his mind, *i.e.*, what his ear doctor recommended and under what conditions he feels that his hearing is most impaired. This should be accompanied by a gentle nod of sympathy and direction of his conversation by asking him to discuss the conditions at work, play, and under adverse conditions, such as in group conversations when there is a noisy background.

In this manner you will be enlarging upon your knowledge of how he feels about his hearing. At the same time you will be allowing him to work off many of the emotional tensions which he feels. Somewhat greater objectivity will ensue. You will be demonstrating to the friend and yourself the benefit which he is deriving from the instrument. When the point of maximum relaxation has been reached, ask him if he does not feel the present conversation has been facilitated by the use of the aid. At the same time turn in the direction of the friend as though asking for his confirmation. Generally, it will be forthcoming. This will tend to strengthen the client's sense of potency and increase his feeling of self-value.

Formal Evaluation Begins

At this point the formal evaluation of the instrument can take place under conditions in which the hearing is controlled in favor of the client. Speech should be delivered in a slow, measured rate with good enunciation. Background noises should be kept to a minimum to avoid confusion, and only one person should speak to the client at a time. The topic of conversation should be held to small talk with a bit of humor.

One of my favorite topics is a discussion of the weather and the out-of-doors activities which it suggests. If it is summer, I would ask the question of whether we should go ice skating this afternoon. The question is ridiculous, but it has a purpose. It is to ascertain whether the subject can follow the abrupt transition in the train of thought. If he does not, look to both the instrument and the individual for the cause. If the transition is missed, it can be shrugged off, and another equally non-threatening topic can be selected and the train of thought once again shifted abruptly.

"Success" is Reward

"Success" during this experience is the reward that has been mentioned earlier in this paper. It is a powerful reward and will do much to stimulate active desire for increased communication because it is attainable.

Our responsibility to the hard of hearing individual does not end here. His initial listening experiences following the acquisition of the instrument must be controlled so that his concept of his ability to use an instrument with personal benefit can change from a hope to a conviction. This is where the services of the accompanying friend are brought into this rehabilitation picture.

Some of the fundamentals of auditory training are explained to him. He should be admonished upon the advantage of having a full light on his face when he is talking to the client at home. The value of good enunciation and measured delivery should be emphasized. The confusion which background noises engender should be explained. The sequence of transition from easy to difficult listening situations should be discussed and briefly demonstrated. This procedure is an integral part of the rehabilitative program of converting a reluctant prospect into an enthusiastic hearing aid user.

In closing, I might say that though I have been forced from my topic by a brief consideration of auditory training it is because the needs of the hard of hearing are not respectors of any one individual's sphere of interest. They represent a total problem which may be best served when the total needs of the individual are considered. It is not difficult, if we will but take a little time and learn more about the client. Then we should place ourselves in his predicament and imagine what our feelings would be. In this way, I have the firm conviction that we can render a more effective service.

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MODERN HEARING TESTS

by Moe Bergman, Ph.D.

A discussion of some modern hearing tests: the audiogram, the speech reception threshold test, the phonetically-balanced word test, tests to detect the presence of recruitment, and tests for babies and those who cannot respond to ordinary test procedures.

TODAY'S hearing tests and test equipment have a brief history. Just a few years ago the watch-tick test, the voice-distance test and similar tests were very much in vogue. The audiometer came along in the early 1920's but was not widely accepted until the late 1930's or even later.

Many are familiar with the audiometer, but for those who are not, let us review briefly how an audiometer test is given to a patient and how it is marked.

The purpose of the pure-tone audiogram, as the graph is called, is to determine, first, how much loss of hearing a person has, and second, what kind of deafness he has. It gives the otologist an important clue as to where in the hearing mechanism the disease is—in the outer ear, in the middle ear, or in the inner ear.

Further Differentiation Possible

Recently, there have been reports that the type of deafness in the inner ear may be differentiated further by tests of hearing function; that is, instead of determining only whether the patient has either an inner ear ("perceptive") deafness, or a middle ear ("conductive") deafness, there are now tests which indicate whether the perceptive deafness is in the cochlea or in other parts of the inner ear and the auditory nervous system.

In the pure-tone audiogram, pure tones mean tones that do not have noticeable harmonics. Harmonics are the overtones that give quality to musical sound, as in sounds produced by musical instruments. The audiometer test is not, however, concerned with the musical sound, but with just the fundamental tone. Tones are presented one at a time to the patient, strongly at first, then weaker.

Thresholds Are Determined

A tone of 1,000 cycles is usually presented strongly at first so that the patient hears it and knows what to listen for. Then, gradually, it is made weaker, until the patient signifies to the tester that he no longer hears it. The weakest point at which he just hears it 50% of the time is considered his threshold. That tone is followed by a test of hearing for other tones until the threshold audiogram is finally determined.

The next type of test that came along was really a technological revision of a test that is perhaps hundreds of years old—the speech test.

In the past, however, we did not have the kind of electronic equipment that we have today to measure the hearing loss accurately. Thanks to the research done at the Harvard laboratories during the war, we now have two basic tests of hearing for speech.

The speech reception threshold test tells us how much loss an individual has for everyday speech, what Dr. Carhart of Northwestern University likes to call "bread - and - butter" speech. Spondee words—having two syllables of equal stress, such as *cowboy, railroad,* and *outside*—are used. The test is an attempt to give an understanding of how well the individual hears familiar, everyday speech.

In giving this test, the words are presented strongly at first, then they are gradually lowered in intensity until the patient can repeat only half the words accurately. This point is described as the speech reception threshold.

This speech reception threshold generally will be in agreement with the average loss to 500, 1,000, and 2,000 cycles on the pure-tone audiogram. For example, a patient who has an average pure-tone loss of 25 db at those frequencies will be apt to have a speech reception threshold of 25 db.

The other test of hearing for speech which is generally used today measures another dimension of audition. In the example cited above, the patient was first tested with pure tones, which gives an idea of the type of deafness he has. His hearing for the spondee words has also been tested.

We still don't know one factor. While we now know how *little* this person hears, we don't know how *much* he hears. There are many people who have a nerve deafness of a kind where they may hear speech, but very distortedly. Making speech louder often makes it more confusing. In other words, they still have a defect of hearing which is not being measured by these threshold hearing tests.

"Discrimination"

The ability to understand speech which is presented loud enough to be heard easily is called "discrimination." The test for this is built upon a list of words of one syllable.

Consonants in the English language are mostly all very high pitched or high-frequency sounds. The vowels have a low-frequency sound.

In a case of nerve deafness where the patient has trouble understanding even loud speech, he generally does not hear the high frequencies as well as low frequencies. In a test of hearing for words like *cowboy, railroad,* and *outside,* he may hear with little

difficulty, even though he does not perceive the consonants.

If less familiar or technical material is presented to him, however, he must hear the consonants clearly in order to understand it.

The test that has been devised to test the ability of discrimination is called the "PB" (phonetically balanced) test. Included in this test is the balance of sounds in English as we meet them in everyday life. In addition, each list is balanced with the sound structure in the next list.

This test is given at a high level, so that throughout the test, the words can be easily heard by the patient. Nevertheless, with high-tone deafness many of the words are lost.

Even with normal hearing, the patient will generally miss several words. A good normal score is 94, 96, or 98; 100% is relatively rare.

In our everyday hearing, we depend upon many additonal clues, such as facial expressions, gestures, and situations. For instance, if I were to walk downtown and meet someone

with whom I had an appointment for supper, and I said to that person, "D'jeet yet?," it would be quite clear to him that I meant, "Did you eat yet?," although it certainly does not sound like that when I say, "D'jeet?"

Knowing the situation, knowing what to expect, help a great deal. In the test, however, no clues are given other than the speech sounds, which must be heard accurately.

Some additonal tests of hearing have been developed during the last few years. Some of these are concerned with a type of phenomenon known as "recruitment." In some cases of nerve deafness there is an ability to hear very loudly sounds presented just above threshold.

For example, let us consider an individual whose hearing at 1,000 cycles shows a loss of 55 decibels. If this person has recruitment, an increase of sound level of 5 db to an audiometer reading of 60 decibels will cause him to hear it very loudly—not just five decibels louder as the normal ear would hear it, or as a conductively deafened ear would hear it—but as much as 30 to 40 decibels louder than when it was at 55 db. This sudden increase in loudness, with only a little change in intensity of the sound, is called "recruitment of loudness."

Clinically, there have been two tests to detect the presence of recruitment. The first one is not new. Dr. Fowler, Senior, introduced it almost twenty years ago. It is called "loudness balance," and is used where the hearing in one ear is considerably better than the hearing in the other ear.

Sounds Equally Loud

For example, a patient may have a threshold, at 1,000 cycles, of 15 db on the left ear and 75 db on the right ear. If the hearing on the bad (right) ear recruits a sound presented at 100 decibels first to one ear, then, also at 100 db, to the other ear, it will sound equally loud in both ears.

In other words, the right ear has gained back all its loss of hearing. This "loudness balance," where we have a balance of one ear against the other above threshold, indicates that the trouble is in the inner ear rather than the middle or the external ear.

Where both ears have similar hearing, but where there is more loss in the high frequencies than in the low frequencies, another test is used for discovering recruitment.

The hearing above threshold is charted for the low frequencies and the high frequencies again by comparing loudnesses. If the contour of the audiogram straightens out at high intensity levels, this indicates the presence of recruitment in the high frequencies.

These two tests for recruitment measure the ability of the ear to suddenly gather back loudness. It is thought today that this occurs in only one type of inner ear deafness, that which occurs only in the cochlea.

"Difference Limen" Tests

There are other tests which require very complicated equipment. These tests are concerned with the smallest change in sound intensity that the ear can detect. Such tests are known as dl ("difference limen") studies and are believed to be related to recruitment.

Then we come to another type of test—a test for babies who are too young to be tested by the methods previously described, or for those who for psychological or other reasons cannot or will not respond.

One of the tests about which we have heard a good deal is the psychogalvanic skin response audiometer test, about which much has been written by Hardy, Bordley, and Pauls.

This test has been done a great deal with children and has been more or less successful. It seems to be quite successful with adults.

In the test, the automatic response of the organism, meaning the body, to a change in environment causes sweat on the skin. The change in environment in which we are interested is the auditory stimulus, sound. In other words, the patient who is taking the test hears a sound which causes automatic sweating all over the body, although the sweating is minute. As a matter of fact, we are not even aware of it.

Galvanometer Measures Threshold

It is enough, however, to measure with a sensitive galvanometer. Since repetition of the sound loses the interest quality for the patient, a slight shock is added to keep the patient alert for the sound. The softest sound that will cause the patient to sweat is his threshold. In this way an audiogram may be constructed.

Another test that is used for psychogenic deafness cases and malingerers (it would not be practical for children) is fairly new and is rather in the amusing plaything stage than in the practical stage. It is called "delayed speech feedback."

If a speaker's voice is fed back at a high level to his ears with a delay of about one-fifth of a second, stuttering and slowing of speech occurs, and he will no longer be able to speak fluently. If this happens in a patient who is supposed to be very deaf, he is probably a malingerer or is psychologically deafened.

Many of the tests discussed so far may be presented either through earphones or through a loudspeaker, in which case both ears are being tested at once. Whatever test is used, and however it is conducted, the tester must remember that the results are meaningful only when they are related to the rest of the findings on the patient.

Dr. Bergman is Associate Professor of Audiology and Speech Pathology and Director of the Hearing and Speech Center, Hunter College of the City of New York. Since 1947 he has been Lecturer in Otolaryngology, College of Physicians and Surgeons, Columbia University, and Lecturer in Special Education, Teachers College, Columbia University.

Official Pr

FOURTH ANNUA

Society of Hearing Ai

HOTEL STATLER **JUNE 10, 1**

FIVE WORKSHOPS

Average Loss Case

Consultation conducted by Mr. Buel C. Kent, Wichita, Kansas.

Borderline Loss Case
(cannot use hearing aid)

Conducted by Mr. Richard H. Taschner, Toledo, Ohio.

Borderline Loss Case
(fitted with a hearing aid)

Conducted by Mr. A. P. Mynders, Philadelphia, Pa.

Very Severe Loss Case

Consultation conducted by Mr. Joseph H. Luebbe, Jr., Toledo, Ohio.

Delivery of Hearing Aid and Earmold to New User

Conducted by Buel C. Kent, Wichita, Kansas.

SATURDAY, JUNE 11th

Morning Session

9:00 Call to Order. Address of Welcome.
Mr. Thornton Zanolli, Detroit, president, S.H.A.A.

9:15 What Does the Hearing Aid Industry Need, and What is Wrong With It?
Mr. Leonard Davis, secretary and director of public relations, American Hearing Aid Association.

9:30 WORKSHOP: Average Loss Case
Consultation conducted by Mr. Buel C. Kent, C.H.A.A., Wichita, Kansas.

10:50-11:00 Ten-minute recess.

11:00 Earmold Discussion
Mr. Buel C. Kent, Mid-States Laboratories, Wichita, Kan.

11:15 The Hearing Aid Audiologist and Post-Sales Service.
Mr. David H. Barnow, vice-president, Beltone Hearing Aid Co., Chicago

11:30 WORKSHOP: Borderline Loss Case
(cannot use hearing aid)
Conducted by Mr. Richard H. Taschner, C.H.A.A., Toledo, Ohio

Afternoon Session

12:30-2:00 Luncheon.
The Hearing Aid Audiologist and the Community
Mr. Robert Will, director, Detroit League for the Handicapped, Inc.

2:00 WORKSHOP: Borderline Loss Case (fitted with a hearing aid)
Conducted by Mr. A. P. Mynders, Philadelphia

3:00 The Hearing Aid Audiologist and His Advertising
Mr. Andrew E. Propper, president, Audivox, Inc., Boston, Mass.

Program

NUAL MEETING

ng Aid Audiologists

10, 11, 12 DETROIT, MICHIGAN

3:15 Some Basic Audiometric Techniques
Mr. L. A. Watson, president, Maico Co., Inc., Minneapolis, Minn.

3:30 WORKSHOP: Very Severe Loss Cass
Consultation conducted by Mr. Joseph H. Luebbe, Jr., Toledo, Ohio

4:30-4:40 Ten-minute recess.

4:40 The Hearing Aid Audiologist and the Otologist
Heinrich Kobrak, M.D., Ph.D., Detroit, Mich.

5:30 WORKSHOP: Delivery of Hearing Aid and Earmold to New User
Conducted by Mr. Buel C. Kent

6:15 Technical Developments of Hearing Aids
Mr. Stanley K. Webster, president, Stanley Webster Laboratories, Inc., Chicago

6:30 The Hearing Aid Audiologist and the Management of His Business
Mr. Leland E. Rosemond, president, Otarion, Inc., Dobbs Ferry, N.Y.

SUNDAY, JUNE 12th

Morning Session

9:00 Annual Business Meeting of the Society of Hearing Aid Audiologists
Reports of Officers and Committees
Election of Governors for Southwest District
Various matters to be taken up by members

12:00 The Hearing Aid Audiologist—Yesterday, Today, and Tomorrow
Kathryn Lyons, Peoria, Ill.

The Registration Desk will be open Friday evening at 6 p.m. Members are urged to arrive early and get their registration taken care of so that the meeting can begin promptly on Saturday morning. The Registration fee is five dollars. This is an educational program and we will adhere strictly to the schedule. Business, addresses, and workshops will begin precisely at the hours shown.

WORKSHOP PANEL PARTICIPANTS: Mr. Ralph I. Schell, Burlington, Vt.; Mr. Dean J. Marcucci, Chicago, Ill.; Miss Esther N. Smith, Danville, Ill.; Miss Ethel Wilson, Flint, Mich.; Mr. Ross W. Alger, Toronto, Ont.; Mr. S. K. Foster, Cincinnati, Ohio; Mr. Joseph W. Manny, New York, N.Y.

TEN ADDRESSES

What Does the Hearing Aid Industry Need, and What is Wrong With It?
Mr. Leonard Davis, secretary and director of public relations, American Hearing Aid Association.

Earmold Discussion
Mr. Buel C. Kent, CHAA, Wichita, Kansas.

The Hearing Aid Audiologist and Post-Sales Service
Mr. David H. Barnow, vice-president, Beltone Hearing Aid Co.

The Hearing Aid Audiologist and the Community
Mr. Robert Will, director, Detroit League for the Handicapped, Inc.

The Hearing Aid Audiologist and His Advertising
Mr. Andrew E. Propper, president, Audivox, Inc.

Some Basic Audiometric Techniques
Mr. L. A. Watson, president, Miaco Co., Inc.

The Hearing Aid Audiologist and the Otologist
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The Hearing Aid Audiologist — Yesterday, Today, and Tomorrow
Kathryn Lyons, CHAA, Peoria, Ill.

PRODUCTS and PEOPLE

PRODUCTS and PEOPLE is designed to keep you informed on current significant developments in the hearing aid industry and on significant happenings to individuals. Address contributions to PRODUCTS and PEOPLE, AUDECIBEL, P. O. Box 11, Lincoln Park, Mich.

New Audiometer Test Room

A bulletin describing the new Burgess-Manning Acousti-Room for audiometric testing has been announced by the company's Architectural Products Division, 5970 Northwest Highway, Chicago.

The illustrated bulletin, No. A-134, gives details of this latest product of the pioneer manufacturers and designers of industrial noise abating equipment. The Acousti-Room for audiometric testing has been under intensive research for the past three years in a move to meet the growing demand for a testing booth that will aid industry in combating the increasingly serious noise problem. Its features and appointments incorporate the suggestions of several hundred skilled audiometric technicians during the development period.

The Acousti-Room is seven feet high, four feet in breadth and seven feet deep. It offers room for a technician and an observer to work comfortably with the person whose hearing is being tested. Added feaures are mechanical ventilation by a large capacity blower equipped with silencers to insure comfort and freedom from noise. The large 18x24 in observation window also eliminates possible shut-in feeling by those under test.

The interior is covered with top quality sound absorbing material. The interior includes a plastic top desk and wall outlets for necessary audiometer test apparatus. A wall-to-wall rug and pad are included. The door is equipped with a firm closing refrigerator-type latch.

The room, which weighs 1,200 pounds, is shipped knocked-down and can be assembled in three to four hours by competent maintenance men. It is completely demountable and, like furniture, can be moved as conditions require.

Copies of actual test data showing performance across full audiometric frequency scale will be furnished by the company upon request.

Transistor Noise Meter

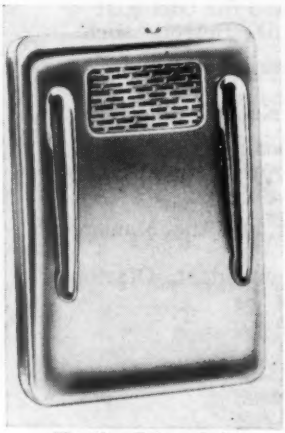
A new simplified transistor noise meter, which furnishes for the first time accurate information on the noise figure of a transistor in a single simple reading by simply inserting the transistor into a socket, has been developed by the Radio Receptor Co., Inc. of Brooklyn.

The equipment is 21½ inches wide, 10⅞ inches high and 16¼ inches deep. It contains a novel, rapid-insertion transistor socket and provision so that the test set may be used in conjunction with other transistor test equipment with a single insertion of the transistor.

Beltone Announces New Model

The Dulcet, a new hearing aid aimed at opening the medium-priced market to Beltone distributors, was announced recently by the Beltone Hearing Aid Co.

The Dulcet — an all-transistor instrument — will fit average hearing losses. It is powered by one single-cell mercury battery with an estimated life of approximately 360 hours.



The New Beltone Dulcet

Designed with a satin finish, stainless alloy case, the Dulcet features gold grille and clips. The chassis is molded of gray lucite plastic and is of one-piece construction for durability.

Raytheon's New Office & Warehouse

The opening of a new warehouse and sales office to speed the shipment of electronic tubes and related products to customers and dealers in the midwest was announced recently by Raytheon Manufacturing Co.

The new structure, at 9501 Grand Ave., Franklin Park, Ill., also contains a modern engineering laboratory for handling commercial engineering problems quickly, without the need for sending such problems back to the home plants in Massachusetts.

Industrial Acoustics' "Quiet Room"

A circular describing the new "Quiet Room," designed by the Industrial Acoustics Co., Inc., for offices and recreation rooms in noisy areas, is available from the company at 341 Jackson Ave., New York 54, N. Y.

FTC Hearing Aid Booklet

"Trade Practice Rules for the Hearing Aid Industry," a 12-page booklet of rules promulgated by the Federal Trade Commission, is available at ten cents per copy, from the Society of Hearing Aid Audiologists, 28 W. Adams Ave., Detroit 26, Mich.

The rules are directed to the elimination and prevention of unfair trade practices and are issued in the interest of protection of the buying public against deception and for the maintenance of fair competitive conditions in the industry, according to the booklet.

Two Speakers Highlight L. A. College Exhibit

Two speakers highlighted the Los Angeles State College audiology department exhibit in observance of National Hearing Week. They were Miss Ciwa Griffiths, former staff member of the department and now chairman of Hear Foundation for pre-school deaf and hard of hearing children, and Dr. John Webster, research psychologist, U.S. Navy Electronics Laboratory. Over 120 students and guests of the department attended the lectures May 2.

Miss Griffiths' unusual demonstration emphasized fitting hearing aids to babies as soon as loss of hearing is evident so that attendance in regular schools is possible with a minimum of special training.

Dr. Webster's lecture on simultaneous messages expressed the need for airport control towers to receive more messages than are now possible and explained how 30 messages, instead of one, can be sent if limited to a 100-cycle band. Exhibitions of an artificial talker and a speech compressor were of special interest.

The real meaning of Radioear's new Two Year Guarantee

TRANSISTORS—as used in Radioear—have proved so trouble-free since they were first designed into Radioear hearing aids, and have enabled them to perform so efficiently and consistently, that the Radioear Guarantee is now extended 100% to Two Full Years from date of purchase.

To those who are asked to recommend hearing aids to their clients, this means more than a service guarantee. Any service and parts guarantee by a responsible company is valuable, but when an existing guarantee can be extended a full 100%, actually based on cost of repair operations over more than two years, it becomes an outstanding achievement. Completely unique in the Industry is the fact that, in extending its guarantee, Radioear made it retroactive to cover all transistor Radioears then in service.

Those who are wearing the All-Transistor, All-Magnetic Radioear are the strongest endorsers of its hearing advantages—its wide frequency range, its quiet operation, its undistracted, clear telephone hearing with the patented, built-in, genuine Phonemaster . . . all of which add up to comfortable, understandable, happy hearing.

This *full* hearing satisfaction along with Radioear's new long service guarantee are the real reasons for the great acceptance of Radioear hearing aids—which can be confirmed by asking *any* Radioear user.

Where can you find a better basis for recommending a hearing aid with certainty and confidence?

Radioear Corporation

306 Beverly Road, Pittsburgh 16, Pennsylvania

RADIOEAR

Trustworthy Hearing Aids Since 1924

The seal of integrity, quality, service

AMERICAN HEARING AID ASSOCIATION

MEMBER

Audivox Meetings Held; Introduce New Model

"Two seemingly insoluble problems of hearing-aid design have at last been solved by science," says Andrew E. Propper, president of Audivox, Inc., successor to Western Electric Hearing Aid Division, Boston manufacturer of hearing equipment.

Mr. Propper announced the new developments in a talk before a meeting of Eastern dealers of Audivox at the Sheraton Park Hotel, Boston, on May 14th.

"Ever since the construction of the first crude hearing aid nearly forty years ago," Mr. Propper said, "hearing devices have suffered two besetting faults: they have been too bulky and too difficult to wear in comfort."

Audivox scientists addressed themselves to these twin problems several years ago, Mr. Propper explained. They determined to create a hearing instrument of great range and reliability no larger that a matchbook, yet far more wearable than existing devices.

"This year," he said, "the new design was perfected and is being placed in production now. Called the 'Micronette', the tiny hearing aid is smaller than an ordinary matchbook, thin as a wrist watch, and light as a pencil. It may be worn in any of eight ways to suit the comfort of the user.

Other speakers at the Audivox meeting included NBC news analyst Lief Eid, who discussed political trends in Washington; R. E. Wagner, Audivox vice-president; R. C. Alexander, Audivox national sales manager; and Ernest W. Gross, vice-president of John C. Dowd, Inc., Audivox's advertising agency.

Audivox, successor to Western Electric Hearing Aid Division, assembles hearing aid consultants to learn about newest progress in field of hearing equipment. Above is scene from Washington, D. C. meeting — others are being held in St. Louis and San Francisco. The new Micronette hearing aid, smaller than a matchbook, was introduced as part of the meeting's program.

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Hearing Week Climaxed by Meeting in New England

ON MAY 7 the New England Hearing Aid Society heard about 50 dealers and manufacturers of hearing equipment reiterate adherence to a code of ethics at a meeting at the Highland Hotel, Springfield, Mass.

The meeting climaxed observance of National Hearing Week to focus attention on problems of those afflicted with deficient hearing.

George F. Croft, president of the Massachusetts Parents Association for the Deaf and Hard-of-Hearing, outlined that group's program in the early diagnosis and treatment of deafness. He cited the cooperation the group has received from hospitals, otologists, therapists and others.

"Reports have continually come to us from deaf and hard-of-hearing people in clinics, hospitals and wherever else we encounter them," he said, "to the effect that 'high pressure' is applied by some dealers who desire only to make a sale of their own particular hearing device, regardless of the plight of the deaf person. It is hoped that this organization you have formed will go far towards establishing a high sense of responsibility on the part of the dealer and manufacturer in their dealings with afflicted persons."

He discussed provisions of legislation now pending in the State House in relation to treatment of the deaf, and said that there are other bills that will be prepared for a later session to be sponsored by his group.

COMPLETES 18 YEARS OF SERVICE—Arne T. Darbo, left, receives a handsome alarm watch and a hand clasp from L. A. Watson, president of the Maico Company, upon completion of 18 years of service with the firm. The presentation was made at the company's semi-annual sales training meeting in Minneapolis in May. Darbo, national director of Maico's special instruments division, lives in Collegedale, Tenn. but spends most of his time traveling and addressing various medical and educational groups in all parts of the country. Special instruments under his supervision include the Maico Stethetron, Chromalizer, audiometers, psychometer, and the Burgess-Manning Acousti-Room.

Maico SALUTES A HEADLINER

BEN DOBROFSKY

OF SIOUX CITY, IOWA

In his five years as a Maico dealer, Ben Dobrofsky of Sioux City, Iowa has become one of the most respected members of the Maico dealer organization. Conscientious, hard-working and very personable, Ben has won the confidence of a large and loyal following among hard-of-hearing people in the Sioux City area.

The job which Ben has done in building his business is a real tribute to both his ability and his determination. The nature of his territory is such that it just isn't practical for him to sit in the office and wait for business to come to him. . . . for the most part, he must go out and get it. As a result, Ben spends much of his time in his car, traveling to rural areas to serve the hard-of-hearing. His work days are long and busy, and that's just the way Ben wants them.

One of Dobrofsky's biggest thrills as a hearing aid dealer came about a year and a half ago when he moved into his new ground floor quarters in the heart of the Sioux City business district. The offices he maintains there are as attractive and well organized as will be found anywhere in the country.

A native of Sioux City, Ben graduated from high school there. He was a wholesale food salesman and later operated a dry cleaning plant before joining the Maico organization. A member of both I.H.A.A. and S.H.A.A., he takes an active part in programs for industry betterment. He and his wife, Eva, have three children. An ardent sports fan, Ben names fishing as his favorite hobby.

A FEW SELECTED DISTRIBUTORSHIPS AVAILABLE

Inquiries will be held in strictest confidence

Maico MEDICAL ACOUSTIC INSTRUMENT CO.

L. A. Watson, President

21 North Third Street Minneapolis 1, Minn.

Quality Control in Hearing Aid Manufacture Dramatized by Recheck System at Telex

THE HEARING aid in which quality control plays a minor part is bound to court trouble for both the distributor and the user.

Constant shrinkage in size of components multiplies the need for exercise of quality control at continually higher levels.

Distributors and users realize this more and more each day as the growth of transistors becomes more evident. . . and hearing aids shrink in size corresponding to the miniaturization accomplished by this new signal-generating device.

In the eyes of the layman quality control probably shapes up as just visual and listening check for hearing aids, *i.e.*, the average person would think that when the hearing aid comes off the production line all that would be necessary is a "look and a listen" before packaging. This is far from the truth.

In the Telex Laboratory, for instance, a staff of 20 people are constantly engaged (at a yearly cost approximating a quarter of a million dollars) in trouble-shooting. To detail the process: the hearing aid, even in the formative stages, long before the chassis is completed, goes through the hands of the quality control people so they can begin to shape up conformance to their standards long before the finished product reaches the end of the production line. These intermediate checks control quality right from the beginning of the manufacturing process.

Then when the aid is completely assembled and after these preliminary checks a complete run-down of all electronic characteristics is carefully taken at test panels where technicians with long experience, using oscilloscopes and other apparatus, explore every operating facet of the hearing aid and make it conform to every point of quality. Even the slightest non-conformance at this point means complete rework of the chassis before it can pass these rigorous tests.

Then there are visual and mechanical tests (again in the Quality Control Department) to make sure that no failure can occur when the distributor uses the hearing aid in the field. Even the slightest scratch on the case is cause for rejection—the slightest hitch in the operation of, say, a volume control wheel, or the slightest variation in the curve of acceleration in the volume control strip—any of these again throw the aid back to the Production Department for complete recheck.

Following complete electrical analysis, mechanical check and a visual going-over, the aid finally gets to a sound-proof room within which are additional sound-proofing localizing devices, and here the aid gets the final listening check to make sure that it is adapted to the human ear . . . and conforms to the acoustic specifications laid down by the Engineering Department.

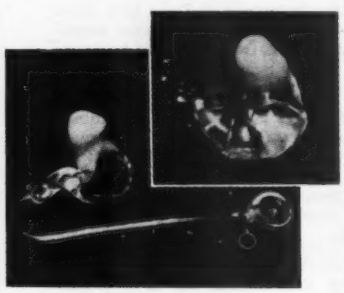
This is not enough. The Engineering Department (which designs the hearing aid originally) then takes over as auditor on the Quality Control Department and spot checks the inventory stock of hearing aids to make sure that the Quality Control Department is performing its job.

In this way standards of performance become an integral part of the production line itself as well as an audit on production (through the final quality control checks) and the department itself is subject to audit through special engineers as inventory is rechecked to make sure that all of the exceptionally high standards are met.

Visitors to the Telex plant are amazed at the amount of time and expense involved in maintenance of these quality standards. They represent a far cry from the usual "look and a listen" to make sure a hearing aid's all right.

Nothing is perfect of course, and even with a quarter of a million dollars spent per year for maintenance of quality control, here and there (due mostly in mishandling in transit) a hearing aid will not perform in the field. But so far as is humanly possible every factor of error has been eliminated through these constant checks maintained in the Telex Laboratories.

The operation of this department assures Telex distributors and Telex users true high fidelity performance proportionate to the cost of the hearing aid.



QUALITY DEALERS

. . . all over the country are acclaiming the new Mid-States Flex-tip earmolds.

This new principle of sound retention is proving to be a boon in the severe loss and hyper-sensitive cases.

If you have not tried the Flex-tip by Mid-States — do so today.

MID-STATES Laboratories
314-315 Butts Bldg.
Wichita, Kansas

"The QUALITY Earmold Facility"

ADVICE OF *Counsel*

(*Continued from page 5*)

ing sobriety. The blood test, urine test and breath test. Actually, all three test the alcohol content of the blood, but by different methods.

In the first, a small amount of blood is withdrawn and analyzed. In the second, a sample of urine is analyzed. In the third, the so-called balloon test, the alcohol in the breath is analyzed.

In the hands of a competent operator, all three tests are accurate, but can be affected by certain factors. For instance, if you have had three or four quick drinks, the blood will show less alcohol if tested immediately after drinking than it will if tested an hour later, when more alcohol has had an opportunity to pass into the blood stream. Of course, the longer the time after the last drink, the less the percentage will be, as a general rule, because the body has a better chance to burn the alcohol.

How can one beat the test? You can't. If you are arrested for drunken driving the police will ask you to take the test. If you do and you have been drinking, you're sunk. The only safe course is to refuse politely but firmly. They can't force you to take the test, because that would be forcing you to testify against yourself. Nor can the police testify that you were asked to take the test and refused, because such testimony proves nothing, but does prejudice the jury and court.

Of course, the best advice any attorney can give you is — if you drink, don't drive.

Next issue — if you are interested, I'll tell you about the new radar speed detector. Quite a gadget.

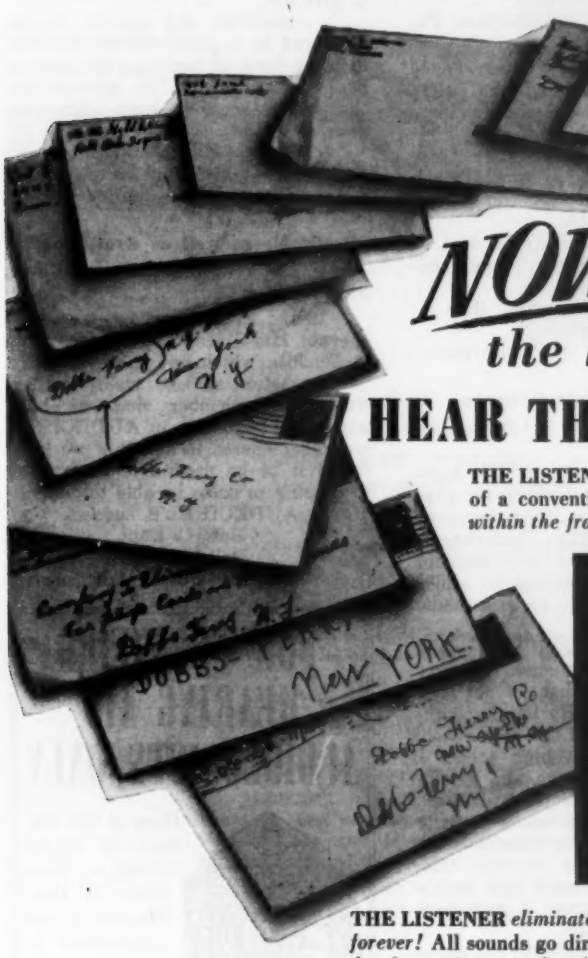
The **MIRACLE** of Dobbs Ferry

They come from every hamlet, town, and city—thousands upon thousands of letters in response to THE MOST REVOLUTIONARY ADVANCE IN HEARING AID DESIGN IN FIFTY YEARS—the "LISTENER". And they're coming from that vast untapped market of 15,000,000 hard-of-hearing Americans *who would never wear a hearing aid before!*

She Hears Through Her Eyeglasses!

The lady in the picture above, pleasantly engaged in dinner conversation actually hears through her spectacles! This latest single-unit hearing aid, which completely eliminates unsightly cords, ear button and separate receiver, has been developed and introduced by a firm in Dobbs Ferry, N. Y.

Called "Listeners", the new hearing aid is built into a pair of horn-rimmed eyeglasses. It is the first of its kind to be made available to the 15 million Americans who need a hearing aid, but won't wear one because of false pride or vanity.



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Likes April Issue

Philadelphia, Pa.

Sirs:

Congratulations on the excellency of the April number of AUDECIBEL. Its medical reporting continues to maintain its excellent and reliable standards, and the information given to otologists as well as those in the hearing aid industry is timely, accurate and dependable.

I can always get a great deal of good help for my patients from reading your journal.

Douglas Macfarlan, M.D.
Hearing Center
University of Pennsylvania

•

Education Helps Child Compete

Lynn, Mass.

Sirs:

May I take exception to Dr. Richard J. Bellucci's statement on page 5 of the May-June 1954 issue of AUDECIBEL: "The unfortunate group of children who were hard of hearing could not compete in school on the same basis as normal children. . . ."?

I was a hard of hearing school child with a total loss in one ear and a sixty percent loss in the other. I not only competed with normally hearing children, but was even in the high school honor society. From high school I entered Simmons College and graduated four years later with a B.S., still competing with normally hearing pupils and without the benefits of a hearing aid — since vacuum tube aids, the first that could help me — were not invented until I had been working for two years.

The above statements are not made to glorify myself; there were other hard of hearing students both before and after my time who did as well and better in public school and in later life. Such students were being educated in every public school system in this country where audiometric testing programs and lip reading (now better known as hearing therapy) were as integral part of the educational program in the twenties, thirties, and forties as they are today.

The Lynn Public Schools employed the first of these lip reading teachers (hearing therapists), Caroline F. Kimball, back in 1917, sharing the honor for this type of educational pioneering with Rochester, N.Y. It was from these fine teachers that the hard of hearing students received the needed encouragement to live with normal people as normal people. Miss Kimball . . . should receive more credit than people seem to be willing to give her.

. . . medicine and science, having advanced to a point where they can help the hard of hearing child, should be generous enough to acknowledge that education has been there for *decades.*

Margaret Manning
Hearing Therapist
Lynn Public Schools

•

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Wichita, Kan.

Sirs:

. . . and as you perhaps know, we operate Mid-States Laboratories here in Wichita which has grown to be a very substantial ear mold facility. You will remember that we have advertised regularly in AUDECIBEL and must hasten to add that we have found it to be profitable as well as gratifying to us to be able to contribute to AUDECIBEL'S success.

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WHO READS AUDECIBEL?

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AUDECIBEL is an educational and professional journal dealing with hearing problems. Its content is designed to enlighten the reader on the technical aspects of sound and human hearing.

AUDECIBEL is published by the Hughes Publishing Company for the Society of Hearing Aid Audiologists. Overall editorial direction remains with the Society's Editorial Director.

AUDECIBEL is not a business magazine. Few Audicebel articles deal with sales, merchandising or management.

AUDECIBEL is read by physicians; eye, ear, nose and throat specialists; teachers; clinicians; and others working with the hard of hearing in schools, hospitals, Veterans Administration facilities and social service agencies — plus, every hearing aid dealer in the United States.

AUDECIBEL is sent to more than 15,000 readers each issue. In 1955, editions will be issued on July 15, Sept. 1, October 15 and December 1.

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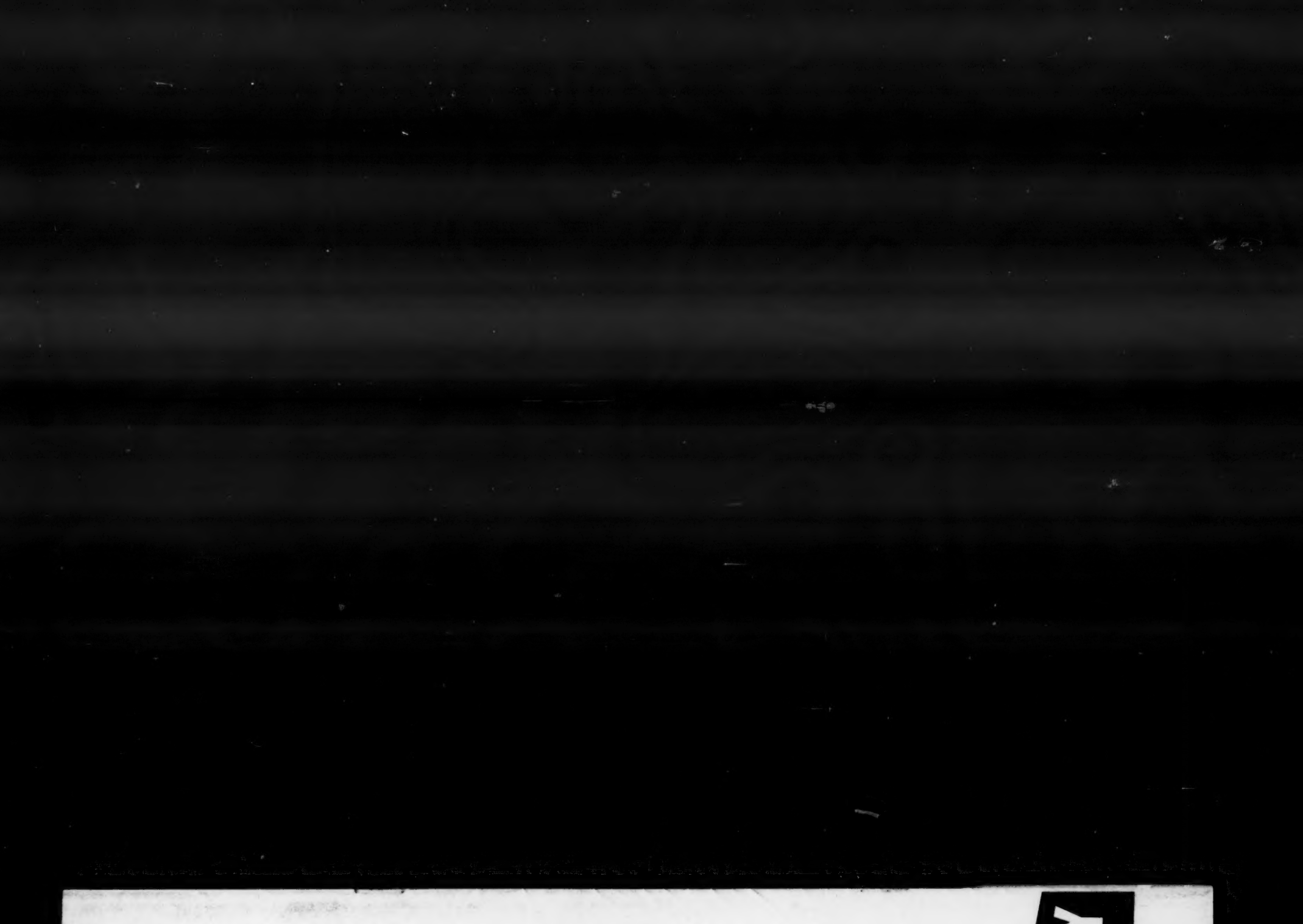
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